

[54] **ELECTRONIC PRESSURE SENSITIVE FORCE TRANSDUCER**

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[*] Notice: The portion of the term of this patent subsequent to Feb. 9, 1999 has been disclaimed.

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Related U.S. Application Data

[62] Division of Ser. No. 300,410, Sep. 8, 1981, abandoned, which is a division of Ser. No. 78,323, Sep. 24, 1979, Pat. No. 4,314,227.

[51] Int. Cl.³ **H01C 10/10; H01C 10/12**

[52] U.S. Cl. **338/99; 338/69; 338/114; 338/100; 84/DIG. 7**

[58] Field of Search **338/69, 99, 100, 114; 200/5 A, 264; 340/365 A; 84/DIG. 7**

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[57] ABSTRACT

A bounceless switch apparatus having a junction resistance which varies inversely with the pressure applied normally thereto which includes a first conductor member, a pressure-sensitive layer including a semiconducting material covering the first conductor member in intimate electrically conducting contact therewith and a second conductor member positioned in nonelectrically conducting relationship to the pressure-sensitive layer. The pressure-sensitive layer has a first surface with a multiplicity of microprotrusions of the semiconducting material which provide a multiplicity of surface contact locations. As the normally open switch is closed in response to a pressing force applied to urge the second conductor member and the first surface together, the physical contact between the microprotrusions and the second conductor increases thereby variably increasing conduction between the first conductor member and the second conductor member.

3 Claims, 4 Drawing Figures

